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EXAMINER

PATEL, MITAL B

ART UNIT PAPER NUMBER

3743

DATE MAILED: 01/28/2004

24

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/813,548

Applicant(s)

GAHAN ET AL.

Examiner

Mital B. Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-54 is/are pending in the application.
- 4a) Of the above claim(s) 38-54 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/15/04 has been entered.

Response to Amendment/Arguments

2. Applicant's arguments filed 1/15/04 have been fully considered but they are not persuasive.

3. In response to Applicant's arguments with respect to the restriction requirement, Applicant contends that the amendment to the independent claims require the filter media to include a polymer coating formed by vapor deposition. However, the Examiner would like to draw attention to the above noted case law with respect to the product-by-process claim in which the end product is given patentable weight and not the process. Therefore, the restriction requirement made in the previous office action is maintained.

4. In response to Applicant's arguments with respect to the "vapor deposition formed" recitation in claims 1 and 26, it should be noted that the recitation does not impart any structure to the claim or the end product.

5. In response to Applicant's arguments regarding vapor deposition treatment, the Examiner maintains that the claim is a product claim and patentable weight is given to the end product not to the process by which the product is formed. "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted).

Information Disclosure Statement

6. The information disclosure statement (IDS) submitted on 6/23/03, the submission of which is in compliance with the provisions of 37 CFR 1.97 upon filing of the RCE. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

8. Claims 1-15, and 17-37 are rejected under 35 U.S.C. 102(a) as being anticipated by Cox (WO 00/78430 A2).

9. **As to claim 1**, Cox teaches an electret filter media comprising a melt blown polymer fiber having formed on at least one surface thereof a polymer coating (**See pages 2-3**). Please note that patentable weight is not given with respect to the recitation "vapor deposition formed." Again, patentability is determined by the **end** product and not the method or process conducted to arrive at the end product.

10. **As to claim 2**, Cox teaches an electret filter media wherein the polymer coating is formed of an oleophobic and/or hydrophobic monomer selected from the group consisting of an alkylene, an acrylate, and a methacrylate. Please note that patentable weight is not given with respect to the recitation "followed by curing of the monomer." Again, patentability is determined by the **end** product and not the method or process conducted to arrive at the end product.

11. **As to claim 3**, Cox teaches an electret filter media wherein the monomer is halogenated.

12. **As to claim 4**, Cox teaches an electret filter media wherein the monomer is a fluorine-containing monomer.

13. **As to claim 5**, Lifshutz teaches an electret filter media wherein the monomer is hexafluoropropylene.

14. **As to claim 6**, Cox teaches an electret filter wherein the filter media has a filter efficiency and degradation value of at least P 95 (**Page 3, line 5, see also Table 1**).

15. **As to claim 7**, Cox teaches an electret filter media wherein the polymer coating is a fluoropolymer.

16. **As to claim 8**, Cox teaches an electret filter media wherein the fluoropolymer is selected from the group consisting of polytetrafluoroethylene and fluorinated ethylenepropylene.

17. **As to claim 9**, Cox teaches an electret filter media wherein the fiber web is a melt blown polymer fiber web that is formed from polymers selected from the group consisting of polyolefins, acrylics, vinyl halides, polyvinyl ethers, polyvinyl halides, polyacrylonitrile, polyvinyl ketones, polyvinyl esters, polyamides, polyesters, polycarbonates, polyimides, polyethers, and fluoropolymers (**Page 2, lines 25-28**).

18. **As to claim 10**, Cox teaches an electret filter media wherein the fiber web includes polymer fibers having a diameter in the range on between about 1 to 20 μm (**Page 2, line 29**).

19. **As to claim 11**, Cox teaches an electret filter media wherein the weight of the fiber web is in the range of between about 10 to about 520 g/m^2 (**Page 2, line 30**).

20. **As to claim 12**, Cox teaches an electret filter media wherein a charge stabilizing additive is incorporated into the fiber web as a melt blown additive (**Pages 4-6**).

21. **As to claim 13**, Cox teaches an electret filter media wherein the charge stabilizing additive is a fatty acid amide (**Pages 4-6**).

22. **As to claim 14**, Cox teaches an electret filter media wherein the fatty acid amide is selected from the group consisting of stearamide, ethylene bis-stearamide, and ethylene bis-palmitamide (**Pages 4-6**).

23. **As to claim 15**, Cox teaches an electret filter media wherein the charge stabilizing additive is presented in the melt blown fiber web at a concentration in a range from about 0.01% to about 20% by weight (**Pages 4-6**).
24. **As to claim 17**, Cox teaches an electret filter media comprising an oleophobic and/or hydrophobic vapor phase deposition treated electret polymer fiber web having a melt processable charge stabilizing additive within the web, wherein the additive is present at a concentration in a range from about 0.01% to 20% by weight.
25. **As to claim 18**, Cox teaches an electret filter media wherein the fiber web has a polymer coating formed thereon (**Pages 4-6**).
26. **As to claim 19**, Cox teaches an electret filter media wherein the polymer coating is formed from the polymerization of a monomer selected from the group consisting of an alkylene, an acrylate, and a methacrylate (**Pages 4-6**).
27. **As to claim 20**, Cox teaches an electret filter media wherein the monomer is halogenated.
28. **As to claim 21**, Cox teaches an electret filter media wherein the monomer is a fluorine-containing monomer.
29. **As to claim 22**, Cox teaches an electret filter media wherein the monomer is hexafluoropropylene.
30. **As to claim 23**, Cox teaches an electret filter wherein the filter media has a filter efficiency and degradation value of at least P 95 (**Page 3, line 5, see also Table 1**).

31. **As to claim 24**, Cox teaches an electret filter media wherein the fiber web includes polymer fibers having a diameter in the range on between about 1 to 20 μm (**Page 6, line 23**).

32. **As to claim 25**, Cox teaches an electret filter media wherein the weight of the fiber web is in the range of between about 10 to about 520 g/m^2 (**Page 6, line 31**).

33. **As to claim 26**, Cox teaches a respirator (**Page 9, line 11**) having a filter element comprising a melt blown polymer fiber having formed on at least one surface thereof a polymer coating. Please note that patentable weight is not given with respect to the recitation "vapor deposition formed." Again, patentability is determined by the **end** product and not the method or process conducted to arrive at the end product.

34. **As to claim 27**, Cox teaches a respirator wherein the polymer coating is formed of an oleophobic and/or hydrophobic monomer selected from the group consisting of an alkylene, an acrylate, and a methacrylate (**Pages 4-6**). Please note that patentable weight is not given with respect to the recitation "followed by curing of the monomer." Again, patentability is determined by the **end** product and not the method or process conducted to arrive at the end product.

35. **As to claim 28**, Cox teaches a respirator wherein the monomer is halogenated.

36. **As to claim 29**, Cox teaches a respirator wherein the monomer is a fluorine-containing monomer.

37. **As to claim 30**, Cox teaches an electret filter media wherein the monomer is hexafluoropropylene.

38. **As to claim 31**, Cox teaches an electret filter media wherein the polymer coating is a fluoropolymer.

39. **As to claim 32**, Cox teaches an electret filter media wherein the fluoropolymer is selected from the group consisting of polytetrafluoroethylene and fluorinated ethylenepropylene.

40. **As to claim 33**, Cox teaches an electret filter media wherein the fiber web is a melt blown polymer fiber web that is formed from polymers selected from the group consisting of polyolefins, acrylics, vinyl halides, polyvinyl ethers, polyvinyl halides, polyacrylonitrile, polyvinyl ketones, polyvinyl esters, polyamides, polyesters, polycarbonates, polyimides, polyethers, and fluoropolymers (**See Pages 4-6**).

41. **As to claim 34**, Cox teaches an electret filter media wherein a charge stabilizing additive is incorporated into the fiber web as a melt blown additive (**See Pages 4-6**).

42. **As to claim 35**, Cox teaches an electret filter media wherein the charge stabilizing additive is a fatty acid amide (**See Pages 4-6**).

43. **As to claim 36**, Cox teaches an electret filter media wherein the fatty acid amide is selected from the group consisting of stearamide, ethylene bis-stearamide, and ethylene bis-palmitamide (**See Pages 4-6**).

44. **As to claim 37**, Cox teaches an electret filter media wherein the charge stabilizing additive is presented in the melt blown fiber web at a concentration in a range from about 0.01% to about 20% by weight (**See Pages 4-6**).

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

45. Claims 1-15 and 26-37 are rejected under 35 U.S.C. 102(b) as being anticipated by Lifshutz et al (US 5,645,627).

46. **As to claim 1**, Lifshutz et al teaches an electret filter media comprising a melt blown polymer fiber having formed on at least one surface thereof a polymer coating. Please note that patentable weight is not given with respect to the recitation "the polymer coating being formed by vapor deposition upon the fiber web." Again, patentability is determined by the **end** product and not the method or process conducted to arrive at the end product.

47. **As to claim 2**, Lifshutz teaches an electret filter media wherein the polymer coating is formed of an oleophobic and/or hydrophobic monomer selected from the group consisting of an alkylene, an acrylate, and a methacrylate (**See Col. 2, lines 7-14**). Please note that patentable weight is not given with respect to the recitation "followed by curing of the monomer." Again, patentability is determined by the **end** product and not the method or process conducted to arrive at the end product.

48. **As to claim 3**, Lifshutz teaches an electret filter media wherein the monomer is halogenated (**See Col. 2, lines 15-21 and Col. 3, lines 61-65**).

49. **As to claim 4**, Lifshutz teaches an electret filter media wherein the monomer is a fluorine-containing monomer (**See Col. 2, lines 15-21 and Col. 3, lines 61-65**).

50. **As to claim 5**, Lifshutz teaches an electret filter media wherein the monomer is hexafluoropropylene (**See Col. 2, lines 15-21 and Col. 3, lines 61-65**).

51. **As to claim 6**, Lifshutz teaches an electret filter wherein the filter media has a filter efficiency and degradation value of at least P 95. It is the Examiner's position that the P value for the filter media disclosed by Lifshutz is inherently 95.

52. **As to claim 7**, Lifshutz teaches an electret filter media wherein the polymer coating is a fluoropolymer (**See Col. 2, lines 15-21 and Col. 3, lines 61-65**). Lifshutz also discloses that the polymer web having the incorporated charge-stabilizing additive is heat-treated either before or after the web is charged in order to enhance the charge stability of the resulting fiber (See Col. 5, line 51-Col. 6, line 16). The media described therein inherently includes a polymer coating on the surface of the fiber web by causing the fluorochemical additive to "bloom" on the surface of the fibers (See Col. 13, lines 44-50 of U.S. 6,288,157 to Jariwala et al.) In either case (additive sprayed on, or additive incorporated and "bloomed" on the surface of the fibers) the resulting layer is inherently a fluoropolymer such as polytetrafluorethylene or fluorinated ethylene propylene depending on which of the disclosed polymer fiber web material(s) is used.

53. **As to claim 8**, Lifshutz teaches an electret filter media wherein the fluoropolymer is selected from the group consisting of polytetrafluoroethylene and fluorinated ethylenepropylene (**See Col. 2, lines 15-21 and Col. 3, lines 61-65**).

54. **As to claim 9**, Lifshutz teaches an electret filter media wherein the fiber web is a melt blown polymer fiber web that is formed from polymers selected from the group consisting of polyolefins, acrylics, vinyl halides, polyvinyl ethers, polyvinyl halides, polyacrylonitrile, polyvinyl ketones, polyvinyl esters, polyamides, polyesters,

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polycarbonates, polyimides, polyethers, and fluoropolymers (**See Col. 2, lines 15-21 and Col. 3, lines 61-65**).

55. **As to claim 10**, Lifshutz teaches an electret filter media wherein the fiber web includes polymer fibers having a diameter in the range on between about 1 to 20 μm (**See Col. 3, lines 61- Col. 4, line**).

56. **As to claim 11**, Lifshutz teaches an electret filter media wherein the weight of the fiber web is in the range of between about 10 to about 520 g/m^2 (**See Col. 3, lines 61- Col. 4, line**).

57. **As to claim 12**, Lifshutz teaches an electret filter media wherein a charge stabilizing additive is incorporated into the fiber web as a melt blown additive (**See Col. 2, lines 7-14**).

58. **As to claim 13**, Lifshutz teaches an electret filter media wherein the charge stabilizing additive is a fatty acid amide (**See Col. 2, lines 7-14**).

59. **As to claim 14**, Lifshutz teaches an electret filter media wherein the fatty acid amide is selected from the group consisting of stearamide, ethylene bis-stearamide, and ethylene bis-palmitamide (**See Col. 2, lines 7-14**).

60. **As to claim 15**, Lifshutz teaches an electret filter media wherein the charge stabilizing additive is presented in the melt blown fiber web at a concentration in a range from about 0.01% to about 20% by weight (**See Col. 2, lines 7-14**).

61. **As to claim 26**, Lifshutz et al teaches a respirator (Col. 2, line 47, please note that the Examiner considers a face mask to be a respirator) having a filter element comprising a melt blown polymer fiber having formed on at least one surface thereof a polymer coating. Please note that patentable weight is not given with respect to the

recitation "the polymer coating being formed by vapor deposition upon the fiber web."
Again, patentability is determined by the **end** product and not the method or process conducted to arrive at the end product.

62. **As to claim 27**, Lifshutz teaches a respirator wherein the polymer coating is formed of an oleophobic and/or hydrophobic monomer selected from the group consisting of an alkylene, an acrylate, and a methacrylate (**See Col. 2, lines 7-14**).

Please note that patentable weight is not given with respect to the recitation "followed by curing of the monomer." Again, patentability is determined by the **end** product and not the method or process conducted to arrive at the end product.

63. **As to claim 28**, Lifshutz teaches a respirator wherein the monomer is halogenated (**See Col. 2, lines 15-21 and Col. 3, lines 61-65**).

64. **As to claim 29**, Lifshutz teaches a respirator wherein the monomer is a fluorine-containing monomer (**See Col. 2, lines 15-21 and Col. 3, lines 61-65**).

65. **As to claim 30**, Lifshutz teaches an electret filter media wherein the monomer is hexafluoropropylene (**See Col. 2, lines 15-21 and Col. 3, lines 61-65**).

66. **As to claim 31**, Lifshutz teaches an electret filter media wherein the polymer coating is a fluoropolymer (**See Col. 2, lines 15-21 and Col. 3, lines 61-65**). Lifshutz also discloses that the polymer web having the incorporated charge-stabilizing additive is heat-treated either before or after the web is charged in order to enhance the charge stability of the resulting fiber (See Col. 5, line 51-Col. 6, line 16). The media described therein inherently includes a polymer coating on the surface of the fiber web by causing the fluorochemical additive to "bloom" on the surface of the fibers (See Col. 13, lines 44-

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50 of U.S. 6,288,157 to Jariwala et al.) In either case (additive sprayed on, or additive incorporated and "bloomed" on the surface of the fibers) the resulting layer is inherently a fluoropolymer such as polytetrafluorethylene or fluorinated ethylene propylene depending on which of the disclosed polymer fiber web material(s) is used.

67. **As to claim 32**, Lifshutz teaches an electret filter media wherein the fluoropolymer is selected from the group consisting of polytetrafluoroethylene and fluorinated ethylenepropylene (**See Col. 2, lines 15-21 and Col. 3, lines 61-65**).

68. **As to claim 33**, Lifshutz teaches an electret filter media wherein the fiber web is a melt blown polymer fiber web that is formed from polymers selected from the group consisting of polyolefins, acrylics, vinyl halides, polyvinyl ethers, polyvinyl halides, polyacrylonitrile, polyvinyl ketones, polyvinyl esters, polyamides, polyesters, polycarbonates, polyimides, polyethers, and fluoropolymers (**See Col. 2, lines 15-21 and Col. 3, lines 61-65**).

69. **As to claim 34**, Lifshutz teaches an electret filter media wherein a charge stabilizing additive is incorporated into the fiber web as a melt blown additive (**See Col. 2, lines 7-14**).

70. **As to claim 35**, Lifshutz teaches an electret filter media wherein the charge stabilizing additive is a fatty acid amide (**See Col. 2, lines 7-14**).

71. **As to claim 36**, Lifshutz teaches an electret filter media wherein the fatty acid amide is selected from the group consisting of stearamide, ethylene bis-stearamide, and ethylene bis-palmitamide (**See Col. 2, lines 7-14**).

72. **As to claim 37**, Lifshutz teaches an electret filter media wherein the charge stabilizing additive is presented in the melt blown fiber web at a concentration in a range from about 0.01% to about 20% by weight (**See Col. 2, lines 7-14**).

Claim Rejections - 35 USC § 103

73. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

74. Claims 2-5 and 17-25 are rejected under 35 U.S.C. 102(b) as anticipated by Lifshutz et al or, in the alternative, under 35 U.S.C. 103(a) as obvious over Lifshutz et al in view of publication "Barrier Properties of Plasma and Chemically Fluorinated Polypropylene and Polyethylenterephthalate" by Friedrich et al.

75. **As to claims 2-5 and 17-25**, Lifshutz discloses all of the features of the article as recited in the noted claims. In particular Lifshutz discloses a melt blown polymer web including an equivalent fluorinated polymer coating formed on one surface thereof, either by spray coating or through an annealing step (See Col. 6, lines 57-61, Col. 5 line 51-Col.6, line 16, Col. 2, lines 51-21, and Col. 3, lines 61-65). However, if the Applicant maintains that the filter media recited in the claims is not expressly disclosed by Lifshutz, such a filter media would have been obvious in view of the teaching of Friedrich et al. Friedrich expressly discloses the creation of a fluorine polymer surface layer on polymer substrates wherein the coating is formed from the monomer

hexafluoropropylene (See the paragraph bridging pages 910 and 911). It would have been obvious to one of ordinary skill in the art to create the polymer coating using the fluorine-containing monomer as taught by Friedrich in order to create highly dense and cross-linked structure and/or allow for higher web speeds by using vapor deposition to create the fluorinated polymer coating on the filtration media.

76. Claims 26-30 are rejected under 35 U.S.C. 102(b) as anticipated by Cox or, in the alternative, under 35 U.S.C. 103(a) as obvious over Cox in view of publication "Barrier Properties of Plasma and Chemically Fluorinated Polypropylene and Polyethyleneterephthalate" by Friedrich et al.

77. **As to claims 26-30**, Cox discloses all of the features of the article as recited (and discloses nearly identical filter media as disclosed by Lifshutz and the media as part of a filter element in a respiratory mask). However, if the Applicant maintains that the filter media recited in the claims is not expressly disclosed by Cox, such a filter media would have been obvious in view of the teaching of Friedrich et al. Friedrich expressly discloses the creation of a fluorine polymer surface layer on polymer substrates wherein the coating is formed from the monomer hexafluoropropylene (See the paragraph bridging pages 910 and 911). It would have been obvious to one of ordinary skill in the art to create the polymer coating using the fluorine-containing monomer as taught by Friedrich in order to create highly dense and cross-linked structure and/or allow for higher web speeds by using vapor deposition to create the fluorinated polymer coating on the filtration media.

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78. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lifshutz et al in view of publication "Barrier Properties of Plasma and Chemically Fluorinated Polypropylene and Polyethylenterephthalate" by Friedrich et al.

79. **As to claim 16**, Lifshutz teaches a melt blown polymer fiber web having formed on at least one surface thereof a polymer coating (**See Col. 6, lines 57-61**). Lifshutz does not expressly teach the thickness of the polymer coating. Friedrich does disclose the polymer coatings of the thickness as claimed. Specifically, Friedrich discloses the formation of a fluorinated layer via vapor deposition of a fluoride-containing monomer to form a surface layer that was 10-100nm thick, i.e., 100 to 1000 Angstroms thick. It would have been obvious to one of ordinary skill in the art to modify the coated polymer web disclosed by Lifshutz to include the vapor deposited coating disclosed by Friedrich in order to minimize the amount of coating materials used to create the filter media and take advantage of faster processing times afforded by the use of coatings deposited by vapor deposition.

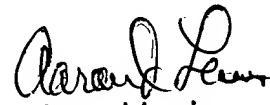
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mital B. Patel whose telephone number is 703-306-5444. The examiner can normally be reached on Monday-Friday (8:00 - 4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Bennett can be reached on 703-308-0101. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0858.


Aaron J. Lewis
Primary Examiner

mbp